In the Specification:

Please amend the specification as shown:

Please delete the paragraph on page 3, line 25 to page 4, line 12 and replace it with the following paragraph:

Although the search for a vaccine has developed in this direction during the last years, the prior art describes a number of attempts of inducing a humoral immune response, i.e., formation of antibodies. Here, the point is to induce not only so-called binding antibodies, but also neutralizing antibodies, i.e., antibodies capable of preventing infection. A human, monoclonal antibody (2F5) described in 1993, which has been obtained via a cell culture from an HIV-positive patient, demonstrates that it is possible, in principle, to induce neutralizing antibodies in humans, and even in HIV-infected individuals. This antibody has a virus-neutralizing spectrum comprising virtually all subtypes of HIV; the antibodies bind to an epitope located at the N-terminal site of the transmembrane passage of the transmembranous envelope protein gp41. It has been possible to demonstrate that the antibodies interact with the ELDKWA **(SEQ ID NO: 105)** epitope. The obvious thing to do was therefore to inject this epitope in the form of a peptide or modified peptide, e.g. in cyclized form, into an organism so as to trigger an antibody response to said epitope and hence to the virus. Thus, J. Tian et al. (2002) suggest linear nonapeptides which have high affinity to the 2F5 antibody. However, it was invariably binding antibodies and never neutralizing antibodies that were induced following immunization with countless forms and modifications of the ELDKWA **(SEQ ID NO: 105)** epitope. There is general agreement in the art that induction of antiviral neutralizing antibodies does not represent a promising option of HIV prevention.

Please delete the paragraph on page 4, line 28 to page 5, line 10 and replace it with the following paragraph:

The investigations of Ferrantelli et al. (2003), who used neutralizing antibodies for passive immunization, showed that neutralizing antibodies such as the 2F5 antibody are suitable not only for prevention, but also in therapy, and apart from 2F5, the authors have disclosed further antibodies for passive immunization, such as IgG1b12, 2G12 and 4E10. Owing to its extraordinary immunogenicity, the V3 loop of the HIV surface protein gp120 is regarded as a promising agent to induce neutralizing antibodies, and the 1b12 and 2G12 neutralizing

antibodies are directed against gp120. Other surface proteins such as the above-mentioned gp41 are regarded as promising little success, because fusion with the target cell via said protein is so rapid that an antibody is not capable of interacting with said protein rapidly enough. Apart from the neutralizing antibodies usable in therapy, another therapy has been developed, which is directed against gp41. In this case, peptides are concerned which, being very small molecules, can interact effectively with the structures of gp41 responsible for infection (Weiss et al., 2003). One of these peptides, T-20, includes the above-described ELDKWA **(SEQ ID NO: 105)** sequence.

Please delete the paragraphs on page 19, line 7 to page 20, line 2 and replace them with the following paragraphs:

Preferred N-terminal sequences are:

FLGFLGAAGSTMGARSMTLTVQARQLLSGIVQQQNNLLRAIEAQQ **(SEQ ID NO: 94)**

FLGAAGSTMGAASMTLTVQARQLLSGIVQQQNNLLRAIEAQQHLL **(SEQ ID NO: 95)**

FLGAAGSTMGAASVTLTVQARLLLSGIVQQQNNLLRAIEAQQHML **(SEQ ID NO: 96)**

FLGFLGAAGSTMGAASITLTVQARQLLS **(SEQ ID NO: 7)**

FLGFLGAAGSTMGAASMTLTVQARQLLS **(SEQ ID NO: 8)**

FLGFLGAAGSTMGAASLTLTVQARQLLS **(SEQ ID NO: 9)**

LLGFLGAAGSTMGAASITLTVQARQLLS **(SEQ ID NO: 10)**

FLGFLGAAGSTMGAASITLTVQVRQLLS **(SEQ ID NO: 11)**

FLGVLSAAGSTMGAAATALTVQTHTLMK **(SEQ ID NO: 12)**

Preferred C-terminal sequences are:

SQNQQEKNEQELLELDKWAGLWSWFSITNWLWY **(SEQ ID NO: 97)**

SQNQQEKNEQELLELDKWASLWNWFNITNWLWY **(SEQ ID NO: 98)**

SQTQQEKNEQELLELDKWASLWNWFDITNWLWY **(SEQ ID NO: 99)**

NEQDLLALDKWASLWNWFDITNWLWYIK **(SEQ ID NO: 13)**

NEQDLLALDKWANLWNWFDISNWLWYIK **(SEQ ID NO: 14)**

NEQDLLALDKWANLWNWFDITNWLWYIR **(SEQ ID NO: 15)**

NEQELLELDKWASLWNWFDITNWLWYIK **(SEQ ID NO: 16)**

NEKDLLALDSWQNLWNWFDITNWLWYIK **(SEQ ID NO: 17)**

NEQELLELDKWASLWNWFSITQWLWYIK **(SEQ ID NO: 18)**

NEQELLALDKWASLWNWFDISNWLWYIK **(SEQ ID NO: 19)**

NEQDLLALDKWDNLWSWFSITNWLWYIK **(SEQ ID NO: 20)**
NEQDLLALDKWASLWNWFDITKWLWYIK **(SEQ ID NO: 21)**
NEQDLLALDKWASLWNWFSITNWLWYIK **(SEQ ID NO: 22)**
NEKKLLELDEWASIWNWLDITKWLWYIK **(SEQ ID NO: 23)**

Please delete the paragraphs on page 21, line 10 to page 24, line 8 and replace them with the following paragraphs:

N: AVGLAIFLLVLAIMAITSSLVAATTLVNQHTTAKV **(SEQ ID NO: 24)**
C: SLSDTQDTFGLETSIFDHLVQLFDWTSWKDWIK **(SEQ ID NO: 25)**, preferably in BIV (transmembranous envelope protein gp40);
N: GVGLVIMLVIMAIVAAAGASLGVANAIQQSYTKAAVQTLAN **(SEQ ID NO: 26)**
C: AMTQLAEEQARRIPEVWESLKDVFDWSGWFSWLKYI **(SEQ ID NO: 27)**, preferably in CAEV (transmembranous envelope protein);
N: FGISAIVAAIVAATAIARSATMSYVALTEVNKIMEVQNH **(SEQ ID NO: 28)**
C: LAQSMITFNTPDSIAQFGKDLWSHIGNWIPGLGASIIKY **(SEQ ID NO: 29)**, preferably in EIAV1 (transmembranous envelope protein gp45);
N: SSSYSGTKMACPSNRGILRNWYNPVAGLRQSLEQYQVVKQPDYLLVPE **(SEQ ID NO: 30)**
C: MDIEQNNVQGKIGIQQLQKWEDWVRWIGNIPQYLK **(SEQ ID NO: 31)**, preferably in FIV (transmembranous envelope protein gp36);
N: GIGLVIVLAIMAIIAAAGAGLGVANAVQQSSYTRTAVQSLANATAAQQN **(SEQ ID NO: 32)**
C: QVQIAQRDAQRIPDVWKALQEAFDWSGWFSWLKYIPW **(SEQ ID NO: 33)**, preferably in OMVV (transmembranous envelope protein gp41);
N: LGFLGFLATAGSAMGAASLVTAQSRTLLAVIVQQQQQLLDVV **(SEQ ID NO: 34)**
C: EEAQIQQEKNMYELWKLNWWDVFGNWFDLTSWDLTSWIKY **(SEQ ID NO: 35)**, preferably in SIVmac (transmembranous envelope protein gp41);
N: LGALGFLGAAGSTMGAAAVTLTVQARQLLSGIVQQQNNLL **(SEQ ID NO: 36)**
C: EEAQSQQEKNERDLLELDQWASLWNWFDITKWLWYIK **(SEQ ID NO: 37)**, preferably in SIVcpz (transmembranous protein gp41);
N: FLGFLGAAGSTMGARSMTLTVQARQLLSGIVQQQNNLLRAIEAQQ **(SEQ ID NO: 94)**
FLGAAGSTMGAASMTLTVQARQLLSGIVQQQNNLLRAIEAQQHLL **(SEQ ID NO: 95)**

FLGAAGSTMGAASVTLTVQARLLLSGIVQQQNNLLRAIEAQQHML **(SEQ ID NO: 96)**

C: SQNQQEKNEQELLELDKWAGLWSWFSITNWLWY **(SEQ ID NO: 97)**
SQNQQEKNEQELLELDKWASLWNWFNITNWLWY **(SEQ ID NO: 98)**
SQTQQEKNEQELLELDKWASLWNWFDITNWLWY **(SEQ ID NO: 99)**
preferably in HIV-1 (transmembranous envelope protein gp41);

N: GIGLVIVLAIMAIIAAAGAGLGVANAVQQSYTRTAVGSLANATAAQQE **(SEQ ID NO: 38)**

C: EAALQVHIAQRDARRIPDAWKAIQEAFNNWSSWFSWLKY **(SEQ ID NO: 39)**, preferably in Visna virus (transmembranous envelope protein gp41);

N: LGFLGFLATAGSAMGARSLTLSAQSRTLLAGIVQQQQQLL **(SEQ ID NO: 40)**

C: EEAQIQEKNMYELQKLNSWDILGNWFDLISWVKYIQ **(SEQ ID NO: 41)**, preferably in HIV-2 (transmembranous envelope protein gp36);

N: WGPTARIFASILAPGVAAAQALREIERLACWSVKQANLTTSLL **(SEQ ID NO: 42)**

C: KFQLMKKHVNKIGVDSDPIGSWLRGIFGGIGEWAVH **(SEQ ID NO: 43)**, preferably in RSV (transmembranous envelope protein gp37);

~~N: SVSHLSSDCNDEVQLWSVTARIFASFFAQGVAAQALKEIERLA~~

~~C: ALQAMKEHTEKIRVEDDQIGDWFTRTFGGLGGWLAK,~~

preferably in ALV (transmembranous envelope protein gp37);

N: GLSLIILGIVSLITLIATAVTACCSLAQSIQAAHTVDLSSQNVTKVMGT **(SEQ ID NO: 46)**

C: IENSPKATLNIADTVDNFLQNLFSNFPSLHSLNKTL **(SEQ ID NO: 47)**, preferably in JSRV (transmembranous envelope protein gp36);

N: AVTLIPLLVGLGVSTAVATGTAGLGVAVQSYTKLSHQLINDVQALSSTI **(SEQ ID NO: 48)**

C: KIKNLQEDLEKRRKALADNLFLTGLNGLLPYLLP **(SEQ ID NO: 49)**, preferably in SMRV (transmembranous envelope protein gp20);

~~N: AIQFIPLVIGLGITTAVSTGTAGLGVSLTWYTKLSHQLISDBQAISSTI~~

C: KIKNLQDDLEKRRKQLIDNPFWTGFHLLPYVMPL **(SEQ ID NO: 51)**, preferably in SRV (transmembranous envelope protein gp20);

N: AVSLTLAVLLGLGITAGIGGSTALIKGPIDLQQGLTSLQIAIDAD **(SEQ ID NO: 54)**

C: SMKKLKEKLDKRQLERQDSQNWYEGWFNNWPWFTT **(SEQ ID NO: 55)**, preferably in GALV (transmembranous envelope protein p15E);

N: EPVSLTLALLLGGLTMGGIAGVGTGTTALVATQQFQQLQAAMHD **(SEQ ID NO: 56)**

C: SMAKLRERLSQRQKLFESQQGWFEGLFNKSPWFTT **(SEQ ID NO: 57)**, preferably in MuLV (transmembranous envelope protein p15E);

N: KALLEAQFRLQLQMQMHTDIQALEESISALEKSL **(SEQ ID NO: 106)**

C: NMAKLRERLKQRQQLFDSQQGWFEGWFNRSPWFTT **(SEQ ID NO: 59)**, preferably in FeLV (transmembranous envelope protein p15E);

N: TAALITGPQQLEKGLSNLHRIVTEDLQALEKSVSNL **(SEQ ID NO: 101)**

C: DHSGAIRDSMSKLRERLERRRREREADQGWFEGWFNRS **(SEQ ID NO: 135)** preferably in PERV (transmembranous envelopeprotein p15E);

N: TALIKGPIDLQQGLTSLQIAMDTDLRALQDSISKLED **(SEQ ID NO: 103)**

C: SMRRLKERLDKRQLEHQKNLSWYEGWFNRSPWLTT **(SEQ ID NO: 104)** preferably in KoRV (transmembranous envelope protein p15E);

N: SPVAALTLGLALSVGLTGINVAVSALSHQRLTSLIHVLEQDQQ **(SEQ ID NO: 60)**

C: PLSQRVSTDWQWPWNWDLGLTAWVRET **(SEQ ID NO: 61)**, preferably in BLV (transmembranous envelope protein of gp30);

N: AVPVAWLVSALAMGAGVAGGITGSMSLASGKSLLHEV **(SEQ ID NO: 62)**

C: PILQERPPLENRVLTGWGLNWDLGLSQWAREALQ **(SEQ ID NO: 63)**, preferably in HTLV-1 (transmembranous envelope protein gp21);

N: AVPIAVWSVSALAAGTGIAGGVTGSLSLASSKSLLLEVD **(SEQ ID NO: 64)**

C: SVLQERPPLEKRVITGWGLNWDLGLSQWAREALQ **(SEQ ID NO: 65)**, preferably in HTLV-2 (transmembranous envelope protein gp30);

N: FPNINENTAYSGENENDCDAELRIWSVQEDDLAAGLSWIPFFGPGI **(SEQ ID NO: 66)**

C: KNISEQIDQIKKDEQKIGRGWGLGGKWWTSDWG **(SEQ ID NO: 67)**, preferably in Marburg virus (transmembranous glycoprotein gp36);

N: LITGGRRTRREAIVNAQPKCNPNLHYWTQDEGAAIGLAWIPYFGPAA **(SEQ ID NO: 68)**

C: KNITDKIDQIIHDFVDKTLPDQGDNDNWWTGWRQWI **(SEQ ID NO: 69)**, preferably in Ebola (transmembranous protein GP2);

N: LITGRLQSLQTYVTQQLIRAAEIRASANLAATKMSECVLGQSKRVDF **(SEQ ID NO: 70)**

C: DRLNEVAKNLNESLIDLQELKYEQYEKWPWYVW **(SEQ ID NO: 71)**, preferably in SARS virus (E2, transmembranous glycoprotein gp36);

N: GLFGAIAGFIENGWEGMIDGWYGFRHQNSEGTGQAADLKSTQAA **(SEQ ID NO: 72)**

C: HDVYRDEALNNRFQIKGVELKSGYKDWILISFA **(SEQ ID NO: 73)**, preferably in influenza virus (hemagglutinin-2, HA2);

N: FAGVVLAGAALGVATAAQITAGIALHQSMLSSQAIDNLRASLETT **(SEQ ID NO: 74)**

C: IAKLEDAKELLESSKQILRSMKGLSSTSIVY **(SEQ ID NO: 75)**, preferably in measles virus (fusion protein F2);

N: FAGIAIGIAALGVATAAQVTAAVSLVQAQTNARAAAMKNSIQTNRA **(SEQ ID NO: 76)**

C: TELSKVNASLQNAVKQIKESNHQLQSVSVSSK **(SEQ ID NO: 77)**,
preferably in mumps virus (fusion glycoprotein F2);

N: FFGAVIGTIALGVATAAQITAGIALAEAREARKDIALIKDSIVKTH **(SEQ ID NO: 78)**

C: TNFLEESKTELMKARAIISVGGWHNTESTQ **(SEQ ID NO: 79)**,
preferably in HPV-1 (F2 glycoprotein),

Please delete the paragraphs on page 25, line 13 to page 27, line 30 and replace them with the following paragraphs:

FLGFLGAAGSTMGAASITLTVQARQLLS(SEQ ID NO: 7),
FLGFLGAAGSTMGAASMTLTVQARQLLS(SEQ ID NO: 8),
FLGFLGAAGSTMGAASLTLTVQARQLLS(SEQ ID NO: 9),
LLGFLGAAGSTMGAASITLTVQARQLLS(SEQ ID NO: 10),
FLGFLGAAGSTMGAASITLTVQVRQLLS(SEQ ID NO: 11),
FLGVLSAAGSTMGAAATALTVQTHTLMK(SEQ ID NO: 12),
FLGFLGAAGSTMGARSMTLTVQARQLLSGIVQQQNNLLRAIEAQQ(SEQ ID NO: 94)
FLGAAGSTMGAASMTLTVQARQLLSGIVQQQNNLLRAIEAQQHLL (SEQ ID NO: 95)
FLGAAGSTMGAASVTLTVQARLLLSGIVQQQNNLLRAIEAQQHML(SEQ ID NO: 96)
AVGLAIFLLVLAIMAITSSLVAATTLVNQHTTAKV(SEQ ID NO: 24),

GVGLVIMLVIMAIVAAAGASLGVANAIQQSYTKAAVQTLAN(SEQ ID NO: 26),

FGISAIVAAIVAATAIARSATMSYVALTEVNKIMEVQNH (SEQ ID NO: 28),
SSSYSGTKMACPSNRGILRNWYNPVAGLRQSLEQYQVVKQPDYLLVPE(SEQ ID NO: 30),
GIGLVIVLAIMAIIAAAGAGLGVANAVQQSSYTRTAVQSLANATAAQQN(SEQ ID NO: 32),
LGFLGFLATAGSAMGAASLVTAQSRTLLAVIVQQQQQLLDVV(SEQ ID NO: 34),
LGALGFLGAAGSTMGAAAVTLTVQARQILSGIVQQQNNLL (SEQ ID NO: 36),
GIGLVIVLAIMAIIAAAGAGLGVANAVQQSYTRTAVGSLANATAAQQE(SEQ ID NO: 38),

LGFLGFLATAGSAMGARSLTLSAQSRTLLAGIVQQQQQLL (SEQ ID NO: 40),
WGPTARIFASILAPGVAAAQALREIERLACWSVKQANLTTSLL (SEQ ID NO: 42),
~~SVSHLSSDCNDEVQLWSVTARIFASFFAQGVAAQALKEIERLA,~~
GLSLIILGIVSLITLIATAVTACCSLAQSIQAAHTVDLSSQNVTKVMGT (SEQ ID NO: 46),
AVTLIPLLVGLGVSTAVATGTAGLGVAVQSYTKLSHQLINDVQALSSTI (SEQ ID NO: 48),
~~AIQFIPLVIGLGITTAVSTGTAGLGVSLTWYTKLSHQLISDBQAISSTI,~~
DPVSLTVALLLGGLTMGSLAAGIGTGTAALIETNQFKQLQ (SEQ ID NO: 52),
AVSLTLAVLLGLGITAGIGGSTALIKGPIDLQQGLTSLQIAIDAD (SEQ ID NO: 54),
EPVSLTLALLLGGLTMGGIAGVGTGTTALVATQQFQQLQAAMHD (SEQ ID NO: 56),
EPISLTVALMLGLTVGGIAAGCGTGTKALLEAQFLQLQMQMHTD (SEQ ID NO: 58),
SPVAALTLGLALSVGLTGINVAVSALSHQRLTSLIHVLEQDQQ (SEQ ID NO: 60),
AVPVAWLVSALAMGAGVAGGITGSMSLASGKSLLHEV (SEQ ID NO: 62),
AVPIAVWSVSALAAGTGIAGGVTGSLSLASSKSLLLEVD (SEQ ID NO: 64),
FPNINENTAYSGENENDCDAELRIWSVQEDDLAAGLSWIPFFGPGI (SEQ ID NO: 66), LITGGRRTRREAIVNAQPKCNPNLHYWTQDEGAAIGLAWIPYFGPAA (SEQ ID NO: 68),
LITGRLQSLQTYVTQQLIRAAEIRASANLAATKMSECVLGQSKRVDF (SEQ ID NO: 70),
GLFGAIAGFIENGWEGMIDGWYGFRHQNSEGTGQAADLKSTQAA (SEQ ID NO: 72),
FAGVVLAGAALGVATAAQITAGIALHQSMLSSQAIDNLRASLETT (SEQ ID NO: 74),
FAGIAIGIAALGVATAAQVTAAVSLVQAQTNARAAAMKNSIQTNRA (SEQ ID NO: 76),
FFGAVIGTIALGVATAAQITAGIALAEAREARKDIALIKDSIVKTH (SEQ ID NO: 78),
the above preferably being N-terminal sequences, and

NEQDLLALDKWASLWNWFDITNWLWYIK (SEQ ID NO: 13),
NEQDLLALDKWANLWNWFDISNWLWYIK (SEQ ID NO: 14),
NEQDLLALDKWANLWNWFDITNWLWYIR (SEQ ID NO: 15),
NEQELLELDKWASLWNWFDITNWLWYIK (SEQ ID NO: 16),
NEKDLLALDSWQNLWNWFDITNWLWYIK (SEQ ID NO: 17),
NEQELLELDKWASLWNWFSITQWLWYIK (SEQ ID NO: 18),

NEQELLALDKWASLWNWFDISNWLWYIK (SEQ ID NO: 19),
NEQDLLALDKWDNLWSWFSITNWLWYIK (SEQ ID NO: 20),
NEQDLLALDKWASLWNWFDITKWLWYIK (SEQ ID NO: 21),
NEQDLLALDKWASLWNWFSITNWLWYIK (SEQ ID NO: 22),
NEKKLLELDEWASIWNWLDITKWLWYIK (SEQ ID NO: 23),
SQNQQEKNEQELLELDKWAGLWSWFSITNWLWY (SEQ ID NO: 97)
SQNQQEKNEQELLELDKWASLWNWFNITNWLWY (SEQ ID NO: 98)
SQTQQEKNEQELLELDKWASLWNWFDITNWLWY (SEQ ID NO: 99)
SLSDTQDTFGLETSIFDHLVQLFDWTSWKDWIK (SEQ ID NO: 25),
AMTQLAEEQARRIPEVWESLKDVFDWSGWFSWLKYI (SEQ ID NO: 27),
LAQSMITFNTPDSIAQFGKDLWSHIGNWIPGLGASIIKY (SEQ ID NO: 29),
MDIEQNNVQGKIGIQQLQKWEDWVRWIGNIPQYLK (SEQ ID NO: 31),
QVQIAQRDAQRIPDVWKALQEAFDWSGWFSWLKYIPW (SEQ ID NO: 33),
EEAQIQQEKNMYELWKLNWWDVFGNWFDLTSWDLTSWIKY (SEQ ID NO: 35),
EEAQSQQEKNERDLLELDQWASLWNWFDITKWLWYIK (SEQ ID NO: 37),
EAALQVHIAQRDARRIPDAWKAIQEAFNNWSSWFSWLKY (SEQ ID NO: 39),
EEAQIQEKNMYELQKLNSWDILGNWFDLISWVKYIQ (SEQ ID NO: 41),
KFQLMKKHVNKIGVDSDPIGSWLRGIFGGIGEWAVH (SEQ ID NO: 43),
~~**ALQAMKEHTEKIRVEDDQIGDWFTRTFGGLGGWLAK**~~,
IENSPKATLNIADTVDNFLQNLFSNFPSLHSLNKTL (SEQ ID NO: 47),
KIKNLQEDLEKRRKALADNLFLTGLNGLLPYLLP (SEQ ID NO: 49),
KIKNLQDDLEKRRKQLIDNPFWTGFHLLPYVMPL (SEQ ID NO: 51),
SMAKLRERFKQRQKLFESQQGQFEGWYNKSPWETT (SEQ ID NO: 53),
SMKKLKEKLDKRQLERQDSQNWYEGWFNNWPWFTT (SEQ ID NO: 55),
SMAKLRERLSQRQKLFESQQGWFEGLFNKSPWFTT (SEQ ID NO: 57),
NMAKLRERLKQRQQLFDSQQGWFEGWFNRSPWFTT (SEQ ID NO: 59),
PLSQRVSTDWQWPWNWDLGLTAWVRET (SEQ ID NO: 61),
PILQERPPLENRVLTGWGLNWDLGLSQWAREALQ (SEQ ID NO: 63),
SVLQERPPLEKRVITGWGLNWDLGLSQWAREALQ (SEQ ID NO: 65),
KNISEQIDQIKKDEQKIGRGWGLGGKWWTSDWG (SEQ ID NO: 67),
KNITDKIDQIIHDFVDKTLPDQGDNDNWWTGWRQWI (SEQ ID NO: 69),
DRLNEVAKNLNESLIDLQELKYEQYEKWPWYVW (SEQ ID NO: 71),
HDVYRDEALNNRFQIKGVELKSGYKDWILISFA (SEQ ID NO: 73),
IAKLEDAKELLESSKQILRSMKGLSSTSIVY (SEQ ID NO: 75),
TELSKVNASLQNAVKQIKESNHQLQSVSVSSK (SEQ ID NO: 77),

TNFLEESKTELMKARAIISVGGWHNTESTQ(SEQ ID NO: 79),
and the latter preferably being C-terminal sequences.

Please delete the paragraphs on page 31, line 26 to page 32, line 12 and replace them with the following paragraphs:

a) synthetic peptides E1 (LGAAGSTMGAASVTLTVQARLLLS **(SEQ ID NO: 5)**, FLGAAGSTMGAASMTLTVQARQLLSGIVQQQNNLLRAIEAQQHLL **(SEQ ID NO: 95)**) and E2 (NEQELLELDKWASLWNWFDITNWL **(SEQ ID NO: 6)** or SQNQQEKNEQELLELDKWASLWNWFNITNWLWY **(SEQ ID NO: 98)**)

b) hybrid I (HIV sequences underlined)
LITQARQLLSDIVQQQRIVTEDLQALEKSVSNLEESLTSLSEVVLQNRRGLDLLFLKKEGLCV ALKEECCFYVDHSGAIRDSMSKLRERLERRRREELDKWASLWNWFN **(SEQ ID NO: 82)**

c) hybrid II (HIV sequences underlined)
LITGASVTLTVQARQLLSDIVQQQRIVTEDLQALEKSVSNLEESLTSLSEVVLQNRRGLDLLF LKKEGLCVALKEECCFYVDHSGAIRDSMSKLRERLERRRREELDKWASLWNWFNITNWL WY **(SEQ ID NO: 83)**

d) loop I: (HIV sequences underlined)
LGAAGSTMGAASVTLTVQARLLLSSSPSSNEQELLELDKWASLWNWFDITNWL **(SEQ ID NO: 84)**

Please delete the paragraph on page 38, lines 4-14 and replace it with the following paragraph:

The invention also relates to the amino acid sequences in accordance with SEQ ID Nos. 1-104, especially for use in medicine. These sequences represent a selection of well-known larger amino acid sequence regions, the above selection furnishing the surprising result of inducing neutralizing antibodies, especially when at least two of the amino acid sequences are used in combination. These amino acid sequences are particularly preferred in the context with a medical indication, i.e., as amino acid sequences to be used for a specific purpose. Of course, the well-known sequence ELDKWA **(SEQ ID NO: 105)** and other

sequences disclosed in the above-mentioned references will not be claimed herein. The invention also relates to the neutralizing antibodies produced using the immunogenic construct according to the invention.

Please delete the paragraphs on page 45, line 17 to page 47, line 13 and replace them with the following paragraphs:

Recombinant CBP fusion proteins

rgp41:

MGCTSMTLTVQARQLLSDIVQQQNNLLRAIEAQQHLLQLTVWGIKQLQARILAVERYLKDQ QLLGIWGCSGKLICTTAVPWNASWSNKSLEQIWNNMTWMEWDREINNYTSLIHSLIEESQ NQQEKNEQELLELDKWASLWNWFNITNWLWYIK **(SEQ ID NO: 85)**

Hybrid I (HIV sequences underlined)

LITQARQLLSDIVQQQRIVTEDLQALEKSVSNLEESLTSLSEVVLQNRRGLDLLFLKKEGLCV ALKEECCFYVDHSGAIRDSMSKLRERLERRRREELDKWASLWNWFN **(SEQ ID NO: 82)**

Hybrid II (HIV sequences underlined)

LITGASVTLTVQARQLLSDIVQQQRIVTEDLQALEKSVSNLEESLTSLSEVVLQNRRGLDLLF LKKEGLCVALKEECCFYVDHSGAIRDSMSKLRERLERRRREELDKWASLWNWFNITNWL WY **(SEQ ID NO: 83)**

Loop I (HIV sequences underlined)

LGAAGSTMGAASVTLTVQARLLLSSSPSSNEQELLELDKWASLWNWFDITNWL **(SEQ ID NO: 84)**

Ectodomain of p15E from FeLV (amino acids 476-583):

LETAQFRQLQMAMHTDIQALEESISALEKSLTSLSEVVLQNRRGLDILFLQEGGLCAAL KEECCFYADHTGLVRDNMAKLRERLKQRQQLFDSQQGWFEGWFNKSPW(SEQ ID NO: 100)

Primers:

rgp41 BamHI fw: cgc gga tcc atg ggc tgc acg tca atgacg ctg **(SEQ ID NO: 107)**

rgp41 XhoI rev: cac ccg ata ctc gag ata cca cag cca att tgt tat g**(SEQ ID NO: 108)**

Hybrid I BamHI fw: cgc cca tcc cta atc aca caa gcg aga cag ctg**(SEQ ID NO: 109)**

Hybrid I XhoI rev: cac ccg ata ctc gag tca gtt gaa cca gtt cca aag **(SEQ ID NO: 110)**

Hybrid I E1mut fw: caa gcg aga cag ctg agt gat att gtt cag caa caa cga att gta acg gaa gat ctc caa gcc c **(SEQ ID NO: 111)**

Hybrid I E1mut rev: ttg ttg ctg aac aat atc act cag cag ctg tct cgc ttg tgt gat tag gga tcc acg cgg **(SEQ ID NO: 112)**

Hybrid I E2mut fw: gaa ctg gat aag tgg gcg tcg ctt tgg aac tgg ttc aac tga gaa ttc aga ctc cag ggg tcg act cga gc **(SEQ ID NO: 113)**

Hybrid I E2mut rev: gtt cca aag cca cgc cca ctt atc cag ttc ttc cct tcg acg cct ctc taa cct ttc tc **(SEQ ID NO: 114)**

Hybrid II BamHI fw: cg gga tcc gga gca tca gta acg ctg acg gta cag cgg aga caa ta ttg tgt gat ata g **(SEQ ID NO: 115)**

Hybrid II XhoI rev: cg ctc gag cta ata cca cag cca att tct tat gtt aaa cca att cca caa act tgc cca tt **(SEQ ID NO: 116)**

Loop I BamHI fw: ggg gat ccc agc ca ttg gag atg tcg aac cag ttc cac aa gaa gcc cat ttg tcc agt tcc agc agt tcc tgt tcg tta gaa gac gga gaa gaa gac a**(SEQ ID NO: 117)**

Loop I XhoI rev: ccg gat ccc tgg gtg ctg ctg gtt cta cca tgg gtg ctg ctt ctg tta ccc tga ccg ttc agg ctc gtc tgc tgc tgt ctt ctt ctc cgt ctt cta acg a**(SEQ ID NO: 118)**

P15E FeLV fw: gcg gat ccc ttg aaa cag ccc agt tca gac aa**(SEQ ID NO: 119)**

p15E FeLV rev: cgg aat tcc cag ggg gac ttg ttg aac cat cc **(SEQ ID NO: 120)**

Please delete the paragraph on page 47, line 31 to page 48, line 12 and replace it with the following paragraph:

Synthetic peptides corresponding to the sequences of the epitopes E1 and E2 of HIV (E1 (LGAAGSTMGAASVTLTVQARLLLS **(SEQ ID NO: 5)**) and E2 (NEQELLELDKWASLWNWFDITNWL **(SEQ ID NO: 6)**) were produced by Jerini Company and purified by means of HPLC. E1 and E2 were used as free antigens (in combination or alone) or on dextran (MW 6 kDa, Sigma). The production of dextran-peptide conjugates was effected either via direct binding of the carboxyl groups included in activated dextran to primary amino groups of the peptides (28), or via a heterobifunctional crosslinker (3-(2-pyridyldithio)propionyl hydrazide, PDPH, Pierce) allowing specific coupling via cysteines attached to the C- or N-terminal end of the peptides (29); overlapping synthetic peptides corresponding to the overall Env (gp120 and gp41) of HIV were obtained from NIH, USA (HIV-Env Peptide Set derived from HIV-1 Isolate MN, Cat#6451). Overlapping and immobilized peptides corresponding to gp41 or p15E of FeLV were produced by Jerine.

Please delete the paragraphs on page 52, lines 18-30 and replace them with the following paragraphs:

The human monoclonal antibody (mAb) 2F5 shows a wide neutralization spectrum to laboratory strains and other primary isolates. Several teams have demonstrated that the antibody binds to a linear sequence (ELDKWA **(SEQ ID NO: 105)**) within the ectodomain of the transmembranous envelope protein gp41 of HIV-1. This sequence is located a few amino acids from the N terminus of the transmembrane passage. Using an epitope mapping method based on a Pepspot membrane, it was possible to confirm this sequence as a binding site for 2F5 (Fig. 3).

2.2 Binding of the monoclonal antibody 2F5 to Dp178 and CBP-rgp41

As was demonstrated in Western blot analyses, the mAb 2F5 has improved binding to the entire ectodomain of gp41 as compared to the 34mer peptide (Dp178) comprising the epitope ELDKWA **(SEQ ID NO: 105)** described in the literature (Fig. 4).

Please delete the paragraph on page 53, lines 17-24 and replace it with the following paragraph:

To test to what extent amino acid substitutions in the peptide P6342 would have an influence on enhanced binding of 2F5 to the sequence ELDKWA **(SEQ ID NO: 105)**, the peptide P6373 (NEQELLELDKWASLW **(SEQ ID NO: 121)**) was applied together with modified peptides (P6342 mut 1-5) on ELISA plates and incubated with 2F5 at a concentration of 3 M urea. Fig. 6 shows the evaluation of the ELISA after substraction of the absorption of 2F5 on P6373 alone. It was found that amino acid substitutions in at least 4 positions of peptide P6342 reduces binding of the monoclonal antibody 2F5.

Please delete the paragraph on page 54, lines 1-3 and replace it with the following paragraph:

It was shown that a 2:1 ratio of P6342 to P6373 results in a significantly enhanced binding of 2F5 to ELDKWA **(SEQ ID NO: 105)** as compared to a ratio of 1:1, implying that two P6342 peptides give better stabilization of ELDKWA **(SEQ ID NO: 105)** than one.

Please delete the paragraph on page 58, lines 7-12 and replace it with the following paragraph:

Fig. 3: Epitope mapping for mAb 2F5 using a Pepspot membrane: 13mer peptides were covalently bound to a nitrocellulose membrane via an acetyl linker. From spot to spot, these peptides overlap by 11 amino acids, covering the entiresequence of gp41. The mAb 2F5 was used at a concentration of 250 ng/ml. The secondary antibody conjugate (anti-human POD) was used at 1:5000. The epitope in the sequence **(SEQ ID NO: 122)** of gp41 is underlined.

Please delete the paragraphs on page 58, line 21 to page 59, line 12 and replace them with the following paragraphs:

Fig. 5: ELISA investigations on binding of mAb 2F5 to Dp178 in combination with overlapping peptides of the ectodomain of gp41: The NIH peptide set comprises 15mer

peptides, each overlapping by 11 amino acids and comprising the entire protein sequence of the envelope protein complex. All peptides were tested in combination withDp178, but only the results for 10 peptides from the N-terminal region of the ectodomain of gp41 are shown. **(A)** The peptide P6342, but not all of the others, enhanced binding of 2F5 to Dp178. Enhanced binding of 2F5 is synergistic, because mAb 2F5 alone does not recognize P6342, and is still observed with 3 M and 5 M urea. The diagram shows mean values from triplicates. **(B)** Sequences of the peptides **(SEQ ID NOS 123-133, respectively, in order of appearance)** employed. DP107 corresponds to the N helix of the ectodomain of gp41 and was co-run as a control.

Please delete the paragraph on page 59, lines 6-12 and replace it with the following paragraph:

P6342:	AASVTLTVQARLLLS **(SEQ ID NO: 86)**
P6342 mut1:	AAAATLTVQARLLLS **(SEQ ID NO: 87)**
P6342 mut2:	AASVAATVQARLLLS **(SEQ ID NO: 88)**
P6342 mut3:	AASVTLAAQARLLLS **(SEQ ID NO: 89)**
P6342 mut4:	AASVTLTVAARLLLS **(SEQ ID NO: 90)**
P6342 mut5:	AASVTLTVQAAALLS **(SEQ ID NO: 91)**

Please delete the paragraph on page 59, lines 21-26 and replace it with the following paragraph:

Fig. 8: Real-time PCR; (A) Inhibition of the 2F5-dependent virus neutralization by the peptides E1 and E2.
The diagram shows the ct values when using a cell lysate following treatment with varying amounts of E1 (LGAAGSTMGAASVTLTVQARLLLS **(SEQ ID NO: 5)**) and E2 (NEQELLELDKWASLWNWFDITNWL **(SEQ ID NO: 6)**) during infection with HIV. 2F5 was used at a concentration of 2.5 μg/ml.

Please delete the paragraph on page 60, lines 26-32 and replace it with the following paragraph:

Fig. 13: Epitope mapping of FeLV-neutralizing serums

Following immunization with the recombinant ectodomain of p15 from FeLV, goat serum 27, 10 rat serums and antibodies purified using affinity chromatography were mapped as described in Fig. 3. Overlapping peptides **(SEQ ID NO: 134)** corresponding to the ectodomain of p15 from FeLV were used. IgG: Prot G-purified antibodies, p15E-P15E-purified antibodies. The four most important epitope domains are framed.

Please delete the paragraphs on page 62, line 1 to page 65, line 11 and replace them with the following paragraphs:

Reference list of amino acid sequences

SEQ ID No 1 QARQLLSDIVQQQ,
SEQ ID No 2 ELDKWASLWNWFN,
SEQ ID No 3 GASVTLTVQARQLLSDIVQQQ,
SEQ ID No 4 ELDKWASLWNWFNITNWLWY,
SEQ ID No 5 LGAAGSTMGAASVTLTVQARLLLS,
SEQ ID No 6 NEQELLELDKWASLWNWFDITNWL,
SEQ ID No 7 FLGFLGAAGSTMGAASITLTVQARQLLS,
SEQ ID No 8 FLGFLGAAGSTMGAASMTLTVQARQLLS,
SEQ ID No 9 FLGFLGAAGSTMGAASLTLTVQARQLLS,
SEQ ID No 10 LLGFLGAAGSTMGAASITLTVQARQLLS,
SEQ ID No 11 FLGFLGAAGSTMGAASITLTVQVRQLLS,
SEQ ID No 12 FLGVLSAAGSTMGAAATALTVQTHTLMK,
SEQ ID No 13 NEQDLLALDKWASLWNWFDITNWLWYIK,
SEQ ID No 14 NEQDLLALDKWANLWNWFDISNWLWYIK,
SEQ ID No 15 NEQDLLALDKWANLWNWFDITNWLWYIR,
SEQ ID No 16 NEQELLELDKWASLWNWFDITNWLWYIK,
SEQ ID No 17 NEKDLLALDSWQNLWNWFDITNWLWYIK,
SEQ ID No 18 NEQELLELDKWASLWNWFSITQWLWYIK,
SEQ ID No 19 NEQELLALDKWASLWNWFDISNWLWYIK,
SEQ ID No 20 NEQDLLALDKWDNLWSWFSITNWLWYIK,
SEQ ID No 21 NEQDLLALDKWASLWNWFDITKWLWYIK,
SEQ ID No 22 NEQDLLALDKWASLWNWFSITNWLWYIK,
SEQ ID No 23 NEKKLLELDEWASIWNWLDITKWLWYIK,

SEQ ID No 24 AVGLAIFLLVLAIMAITSSLVAATTLVNQHTTAKV,

SEQ ID No 25 SLSDTQDTFGLETSIFDHLVQLFDWTSWKDWIK,

SEQ ID No 26 GVGLVIMLVIMAIVAAAGASLGVANAIQQSYTKAAVQTLAN,

SEQ ID No 27 AMTQLAEEQARRIPEVWESLKDVFDWSGWFSWLKYI,

SEQ ID No 28 FGISAIVAAIVAATAIARSATMSYVALTEVNKIMEVQNH,

SEQ ID No 29 LAQSMITFNTPDSIAQFGKDLWSHIGNWIPGLGASIIKY,

SEQ ID No 30

SSSYSGTKMACPSNRGILRNWYNPVAGLRQSLEQYQVVKQPDYLLVPE,

SEQ ID No 31 MDIEQNNVQGKIGIQQLQKWEDWVRWIGNIPQYLK,

SEQ ID No 32 GIGLVIVLAIMAIIAAAGAGLGVANAVQQSSYTRTAVQSLANATAAQQN,

SEQ ID No 33 QVQIAQRDAQRIPDVWKALQEAFDWSGWFSWLKYIPW,

SEQ ID No 34 LGFLGFLATAGSAMGAASLVTAQSRTLLAVIVQQQQQLLDVV,

SEQ ID No 35 EEAQIQQEKNMYELWKLNWWDVFGNWFDLTSWDLTSWIKY,

SEQ ID No 36 LGALGFLGAAGSTMGAAAVTLTVQARQLLSGIVQQQNNLL,

SEQ ID No 37 EEAQSQQEKNERDLLELDQWASLWNWFDITKWLWYIK,

SEQ ID No 38 GIGLVIVLAIMAIIAAAGAGLGVANAVQQSYTRTAVGSLANATAAQQE,

SEQ ID No 39 EAALQVHIAQRDARRIPDAWKAIQEAFNNWSSWFSWLKY,

SEQ ID No 40 LGFLGFLATAGSAMGARSLTLSAQSRTLLAGIVQQQQQLL

SEQ ID No 41 EEAQIQEKNMYELQKLNSWDILGNWFDLISWVKYIQ,

SEQ ID No 42 WGPTARIFASILAPGVAAAQALREIERLACWSVKQANLTTSLL,

SEQ ID No 43 KFQLMKKHVNKIGVDSDPIGSWLRGIFGGIGEWAVH,

~~SEQ ID No 44 SVSHLSSDCNDEVQLWSVTARIFASFFAQGVAAQALKEIERLA,~~

~~SEQ ID No 45 ALQAMKEHTEKIRVEDDQIGDWFTRTFGGLGGWLAK,~~

SEQ ID No 46 GLSLIILGIVSLITLIATAVTACCSLAQSIQAAHTVDLSSQNVTKVMGT,

SEQ ID No 47 IENSPKATLNIADTVDNFLQNLFSNFPSLHSLNKTL,

SEQ ID No 48 AVTLIPLLVGLGVSTAVATGTAGLGVAVQSYTKLSHQLINDVQALSSTI,

SEQ ID No 49 KIKNLQEDLEKRRKALADNLFLTGLNGLLPYLLP,

~~SEQ ID No 50 AIQFIPLVIGLGITTAVSTGTAGLGVSLTWYTKLSHQLISDBQAISSTI,~~

SEQ ID No 51 KIKNLQDDLEKRRKQLIDNPFWTGFHLLPYVMPL,

SEQ ID No 52 DPVSLTVALLLGGLTMGSLAAGIGTGTAALIETNQFKQLQ,

SEQ ID No 53 SMAKLRERFKQRQKLFESQQGQFEGWYNKSPWETT,

SEQ ID No 54 AVSLTLAVLLGLGITAGIGGSTALIKGPIDLQQGLTSLQIAIDAD,

SEQ ID No 55 SMKKLKEKLDKRQLERQDSQNWYEGWFNNWPWFTT,

SEQ ID No 56 EPVSLTLALLLGGLTMGGIAGVGTGTTALVATQQFQQLQAAMHD,

SEQ ID No 57 SMAKLRERLSQRQKLFESQQGWFEGLFNKSPWFTT,

SEQ ID No 58 EPISLTVALMLGLTVGGIAAGCGTGTKALLEAQFLQLQMQMHTD,

SEQ ID No 59 NMAKLRERLKQRQQLFDSQQGWFEGWFNRSPWFTT,
SEQ ID No 60 SPVAALTLGLALSVGLTGINVAVSALSHQRLTSLIHVLEQDQQ,
SEQ ID No 61 PLSQRVSTDWQWPWNWDLGLTAWVRET,
SEQ ID No 62 AVPVAWLVSALAMGAGVAGGITGSMSLASGKSLLHEV,
SEQ ID No 63 PILQERPPLENRVLTGWGLNWDLGLSQWAREALQ,
SEQ ID No 64 AVPIAVWSVSALAAGTGIAGGVTGSLSLASSKSLLLEVD,
SEQ ID No 65 SVLQERPPLEKRVITGWGLNWDLGLSQWAREALQ,
SEQ ID No 66 FPNINENTAYSGENENDCDAELRIWSVQEDDLAAGLSWIPFFGPGI,
SEQ ID No 67 KNISEQIDQIKKDEQKIGRGWGLGGKWWTSDWG,
SEQ ID No 68 LITGGRRTRREAIVNAQPKCNPNLHYWTQDEGAAIGLAWIPYFGPAA,
SEQ ID No 69 KNITDKIDQIIHDFVDKTLPDQGDNDNWWTGWRQWI,
SEQ ID No 70 LITGRLQSLQTYVTQQLIRAAEIRASANLAATKMSECVLGQSKRVDF,
SEQ ID No 71 DRLNEVAKNLNESLIDLQELKYEQYEKWPWYVW,
SEQ ID No 72 GLFGAIAGFIENGWEGMIDGWYGFRHQNSEGTGQAADLKSTQAA,
SEQ ID No 73 HDVYRDEALNNRFQIKGVELKSGYKDWILISFA,
SEQ ID No 74 FAGVVLAGAALGVATAAQITAGIALHQSMLSSQAIDNLRASLETT,
SEQ ID No 75 IAKLEDAKELLESSKQILRSMKGLSSTSIVY,
SEQ ID No 76 FAGIAIGIAALGVATAAQVTAAVSLVQAQTNARAAAMKNSIQTNRA,
SEQ ID No 77 TELSKVNASLQNAVKQIKESNHQLQSVSVSSK,
SEQ ID No 78 FFGAVIGTIALGVATAAQITAGIALAEAREARKDIALIKDSIVKTH,
SEQ ID No 79 TNFLEESKTELMKARAIISVGGWHNTESTQ.
SEQ ID No 80 LGAAGSTMGAASVTLTVQARLLLS) and
SEQ ID No 81 NEQELLELDKWASLWNWFDIT NWL
SEQ ID No 82
LITQARQLLSDIVQQQRIVTEDLQALEKSVSNLEESLTSLSEVVLQNRRGLDLLFLKKEG
LCVALKEECCFYVDHSGAIRDSMSKLRERLERRRREELDKWASLWNWFN
SEQ ID No 83
LITGASVTLTVQARQLLSDIVQQQRIVTEDLQALEKSVSNLEESLTSLSEVVLQNRRGLD
LLFLKKEGLCVALKEECCFYVDHSGAIRDSMSKLRERLERRRREELDKWASLWNWFNI
TNWLWY
SEQ ID No 84
LGAAGSTMGAASVTLTVQARLLLSSSPSSNEQELLELDKWASLWNWFDITNWL
SEQ ID No 85
MGCTSMTLTVQARQLLSDIVQQQNNLLRAIEAQQHLLQLTVWGIKQLQARILAVERYLK
DQQLLGIWGCSGKLICTTAVPWNASWSNKSLEQIWNNMTWMEWDREINNYTSLIHSLI
EESQNQQEKNEQELLELDKWASLWNWFNITNWLWYIK

SEQ ID No 86 AASVTLTVQARLLLS

SEQ ID No 87 AAAATLTVQARLLLS

SEQ ID No 88 AASVAATVQARLLLS

SEQ ID No 89 AASVTLAAQARLLLS

SEQ ID No 90 AASVTLTVAARLLLS

SEQ ID No 91 AASVTLTVQAAALLS

SEQ ID No 92 LGAAGSTMGAASVTLTVQARLLLS

SEQ ID No 93 NEQELLELDKWASLWNWFDITNWL

SEQ ID No 94 FLGFLGAAGSTMGARSMTLTVQARQLLSGIVQQQNNLLRAIEAQQ

SEQ ID No 95 FLGAAGSTMGAASMTLTVQARQLLSGIVQQQNNLLRAIEAQQHLL

SEQ ID No 96 FLGAAGSTMGAASVTLTVQARLLLSGIVQQQNNLLRAIEAQQHML

SEQ ID No 97 SQNQQEKNEQELLELDKWAGLWSWFSITNWLWY

SEQ ID No 98 SQNQQEKNEQELLELDKWASLWNWFNITNWLWY

SEQ ID No 99 SQTQQEKNEQELLELDKWASLWNWFDITNWLWY

SEQ ID No 100

LETAQFRQLQMAMHTDIQALEESISALEKSLTSLSEVVLQNRRGLDILFLQEGGLC

AALKEECCFYADHTGLVRDNMAKLRERLKQRQQLFDSQQGWFEGWFNKSPW

SEQ ID No 101 TAALITGPQQLEKGLSNLHRIVTEDLQALEKSVSNL

SEQ ID No 102 DHSGAIRDSMSKLRERLERRRREREADQDSISKLED

SEQ ID No 103 TALIKGPIDLQQGLTSLQIAMDTDLRALQDSISKLED

SEQ ID No 104 SMRRLKERLDKRQLEHQKNLSWYEGWFNRSPWLTT